

WASHRAG

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VOLUME 21 Issue 07
JULY 2019

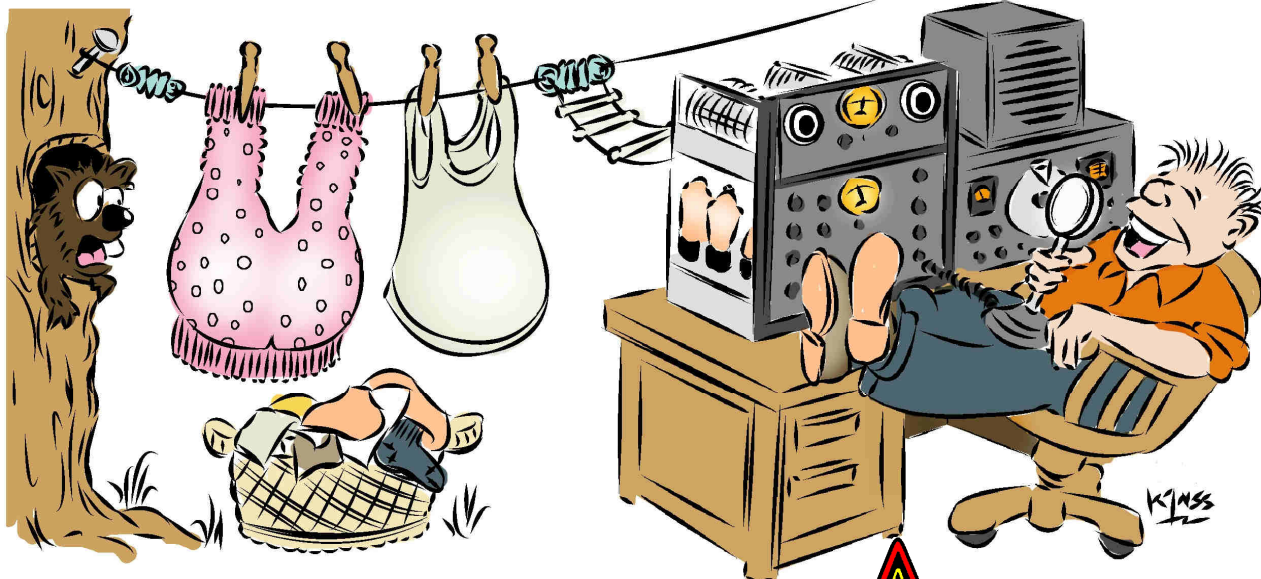
Wireless Association of South Hills

N3SH WA3SH NP2SH/B

www.n3sh.org www.washarc.org



Wireless Association of South Hills



WASHRAG™



VOLUME 21 ISSUE 07

JULY 2019

Next Monthly Meeting: Thursday, July 11th, 2019

The next meeting of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** will be on **Thursday, July 11th 2019**, at the **Eat 'n' Park** at 301 South Hills Village, Bethel Park. The room is available at 6:30 PM. The meeting will be starting at 7:00 PM.

Subjects for the meeting include Field Day 2019 wrap-up, Pa QSO 2019, and upcoming plans for the rest of 2019.

See you there!

Cover Photo: The Tower Trailer during W3C Field Day setup in South Park, Saturday morning.

Cover Photo courtesy of & © Copyright 2019 Ron Notarius W3WN

WASH 2019 OFFICERS

EXECUTIVE COMMITTEE:

President	Tony Romano KB3BYA
VP / Secretary	Dan Campbell K3CMU
VP / Treasurer	Mark Stabryla N3RDV

AND WE COULDN'T DO IT WITHOUT:

N3SH Trustee	Larry Comden K3VX
WA3SH Trustee	Rich Danko N3SBF
NP2SH Trustee	Paul Jordan NP2JF
N3SH WA3SH NP2SH/B QSL Manager	Ron Notarius W3WN
NP2SH 2009 QSL Manager	Carl Schroeder K9CS
VE Team Liaison	Ron Notarius W3WN
Webmaster	Curtis Turner KB3CMT
Quartermaster	Harold Rosenberger K3HCR
WASH FM Net Manager	Chuck Bihun KC3ELA
WASHFest 2020 Committee	Carol Danko KB3GMN, Chairman
	Bill Hill W3WH, Co-Chair
Activities & Operating Events	Rick Bell KB3IAC
Ways & Means	Carol Danko KB3GMN
WASH 2M Contest Chair	Chuck Bihun KC3ELA
Field Day 2019 Coordinators	Rick Bell KB3IAC
	Bill Hill W3WH

CLUB-AFFILIATED REPEATERS, BEACONS, & DIGIPEATERS:

Mt. Lebanon	N3SH / R	146.955 MHz (-)	PL 131.8
North Side	N3SH / R	442.550 MHz (+)	PL 131.8
Canonsburg	N3FB / R	443.650 MHz (+)	PL 131.8
St. Johns, VI	NP2SH / B	28.276 MHz	Propagation Beacon
Canonsburg	N3SH	144.390 MHz	APRS Digipeater

N3SH / WA3SH WASHNet, the weekly on-air net of WASH, meets every

Monday Night, 8:00 PM ET, on the 146.955 & 443.650 repeaters.

All radio amateurs, WASH members or not, are welcome to join in!

THE LEGAL STUFF

"The WASHRag™" (formerly "The Mariner™") is the Official Newsletter of the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC. (WASH)**, a 501.C.3 not for profit organization.

Published Monthly with occasional Special Editions as warranted.

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Editor & Publisher: Ron Notarius W3WN

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The **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** was founded on August 23rd, 1993, as the original **SOUTH HILLS AMATEUR RADIO CLUB**, and operated under that name through 1998. WASH was also known briefly in late 1998 as the **N3SH AMATEUR RADIO CLUB**. It is not in any way affiliated with the "South Hills Amateur Radio Club, Inc." and is not responsible for that group, it's members, or it's actions in any way, shape, or form.

As always, special thanks to the owners & operators of both the N3SH/R Repeaters and the N3FB/R Repeater System for permitting the **WIRELESS ASSOCIATION OF SOUTH HILLS, INC.** and it's members to use their repeaters for club purposes.

WASH Amateur Radio Club News Briefs

Next WASH VE Test July 18th

The Next WASH VE exam sessions will be **Thursday, July 18th, 2019**, 7:00 PM, at the **WPXI Community Room**, 4145 Evergreen Road, Pittsburgh, PA 15214. Talk-in on the 146.955 MHz and 443.650 MHz repeaters. All examiners are ARRL VEC affiliated.

Pre-registration is not required. Walk-ins welcome!

But if you plan on attending the test session, please contact VE Team Liason Ron Notarius W3WN:

Telephone (412) 572-6723 or E-Mail: w3wn@n3sh.net

Please bring the following to your test session:

Picture ID or other suitable identification (2 forms of ID required)

Pen / Pencil / Calculator

Original FCC license plus a copy of license (if upgrading)

Original CSCE plus a copy of CSCE (if upgrading)

Check or Cash in the amount of **\$15.00** (payable to: ARRL VEC)

Future test dates: October 17th, 2019
 February 23rd, 2020

Tony's Musings

Field Day was a huge success!

Thanks to all who participated and helped out!

Special thanks to Bill W3WH, and Larry K3VX for being Point, thanks to Rick KB3IAC for T-shirts and Food, Thanks to Carol and Richie KB3GMN N3SBF for Food. From initial set-up through 24 hours & operation to tear-down, The **WIRELESS ASSOCIATION OF SOUTH HILLS** demonstrated enthusiasm, camaraderie, and a can do attitude.

Job well done everyone!

— 73, Tony Romano KB3BYA

*President, Wireless Association of South Hills, Inc.
N3SH / WA3SH / NP2SH*



"The QSL Man", Wayne Carroll W4MPY, of Aiken SC, became a Silent Key on July 3rd. He was 87. Starting in the 1970's, Wayne and his wife Lola N4KAI (SK) started what became one of the most well-known QSL card printing shops in the world.

The last weekend in June, Field Day under our belts, and the Fourth of July a half-week away... time does fly when you're having fun! Which brings us around once again to the monthly gathering of the **WASH Breakfast Gang**, at **Eat 'N Park**, 3380 Washington Road (US 19) in McMurray. The June contingent included W3WH, K3VX, K3HCR, N3FB, KB3GMU, WB4GCS, KC4WTT, K3SGT & Barb, and W3WN. Topics of the morning involved Starbucks vs. Real Coffee, why was Field Day Phone QSO numbers down?, programming the keyer at Field Day, buying TS-890, the "no deposit" reservation list for the K4, fixing up homes for sale, Field Day pictures, DXpedition rigs, Mercer County for Pa QSO this year, "From The Earth To The Moon", "Apollo 13", "Apollo 11", room for expansion – copper feedline on a steel tower, measuring output power – horizontal plane vs. vertical plane, WQED moving from VHF Channel 13 to VHF Channel 4, FCC is trying to do something about robocalls, Arecibo Observatory and EME, Weather Impact Day, the Star Wars Legacy, a new Maunder Minimum coming up?, the 2200 meter band, ELF & Submarines... and that's just part of the table...

Our next gathering of the Gang will be on July 27th, returning to the **Eat 'N Park**, 3380 Washington Road (US 19) in McMurray, officially starting at **8:00 AM**. While we don't need a "head count" to reserve tables as we've previously done, **please** let Jim WB4GCS know ahead of time if you are planning on coming... if you don't, though and decide at the last minute, we'll have plenty of room for you! See you there?

As many of you are aware, our own Jim WB4GCS has been **under the weather** lately as he is recuperating from a medical procedure. Unfortunately, the timing was such that he could not make Field Day this year to help setup or operate (he did join us for breakfast, though), but he has been vastly improving and we will be seeing him at club events in the near future. Even so, keep Jim in your thoughts and prayers as he is recovering.

Loads of **W3C Field Day 2019** pictures in the newsletter today. Our thanks to everyone who sent something in. If any more come up in the next few weeks, we'll run some next month as well.

As always, **Field Day** was a lot of fun. It was especially great seeing so many new members participate, and all the visitors finding out about Amateur Radio. Yes, the score was down from last year... but the score isn't the important thing. (Well, maybe a little) The important thing is to pull together as a group, run a successful event, and have a lot of fun together doing so – and from that point of view, we did great and succeeded mightily even before the first QSO was logged.

So what's up next? A few more summer and fall hamfests, some contests and other activities, and then the **2019 Pennsylvania QSO Party**. Stay tuned! (And work on your antennas, while you can!) Speaking of hamfests, W3WN is looking to share a car ride and a table for some of these in the area, please contact him if interested or available.



The **July VE Exams** are coming up in a few days. As always, we need a few VE's to come and help out. If you're available and interested, please contact W3WN.

One last thing... the YL pictured to the left was recently spotted at Pittsburgh International Airport. What can we say? **Nice hat!** (No, sorry to say, she's not an Amateur Radio Operator. Care to take a guess as to what the hat is referring to?)



WB4GCS, N3SBF & KC4WTT

Join WASH or Renew your Membership Today! Membership Application on Page 19

Minutes, June 6th Meeting

Dan Campbell K3CMU, Vice President/Secretary, WASH

Call to Order: 19:02 hours; Presiding Officer: Tony Romano (KB3BYA)

Pledge of Allegiance Moment of Silence: Silent Keys & Others

Number of Members Present: 20 Numbers of Guests: 1

Introductions: Guest(s) Name(s): Corky Bennett (N3MJP) – membership pending

COMMITTEE REPORTS

Treasurer: Mark Stabryla, (N3RDV)

+ Motion to Accept: Larry (K3VX);

+ Seconded: Glen (KE7FD); Passed: Yes

Secretary: Dan Campbell (K3CMU)

+ Are there any corrections to the Minutes: No

+ Motion to Accept: Richy (N3SBF)

+ Seconded: Carol (KB3GMN); Passed: Yes

Correspondence: (None)

Repeaters: Frank Bobro (N3FB): NO Issues

WASHNet: Charles (Chuck) Bihun, III (K3CELA): Working, good participation; boy Scouts involved; question about net logging app

Contests: Larry Comden (K3VX): VHF/UHF ARRL – Saturday - 14:00 hrs. to Sunday - 22:59 hrs; add'l points awarded for higher frequencies.

Public Service: Mike (WH3PYU): Rachel Carson Trail challenge - July 23rd; Apollo Walk – August 24th (radio equip't provided); Corky Bennett (N3MJP) - Vintage Grand Prix, July 11-21, 2019.

Newsletter: Ron Notarius (W3WN): Published!

Volunteer Examiners: Ron Notarius (W3WN): Exam: July 18, 2019, channel 11, 19:00 hrs; Next VE Exam – October.

Ways & Means: Carol Danko (KB3GMN): None

Membership Contributions: (KB3GMN): Pending end of meeting.

President's Report Tony Romano (KB3BYA) Public Outreach to Boy Scouts going well; additional efforts planned; more visibility for the club desired; Post-Gazette article about WASH positive.

Old Business:

Working toward add'l Boy Scout troop contacts, Several expressed interest; Tony (KB3BYA) will fwd. add'l info to troops;

Glen (KE7FD) Aiden interested in HF radio

Bill (W3WH) & Larry (K3VX): Field Day: Band Pass filter was purchased at Hamvention; TriPlexer on back-order (have all jumpers in hand); Sign-up sheet for set-up and tear-down being passed around; breakfast at South Park Eat'n Park at 8:00 hours; GOTA Station ready (for Technicians, inactive HF and non-licensed)

Dan (K3CMU) arrange for signs to invite passers-by to Field Day.

New Business:

July meeting postponed to July 11, 19:00 hrs., Location: Eat'n Park, 301 South Hills Village, 15241. Tony will make reservations.

Generic business cards would be handy during outreach activities.

Motion to approve purchase: Glen (KE7FD), Seconded: Ron (W3WN): passed.

Good of the Order: No comments.

MOTION TO ADJOURN: By: Chuck (KC3ELH); Seconded By: Bill (W3WH)

Meeting Adjourned: 19:30 hours



WASH Spotlight: Fire!

Harold K3HCR prepares to launch an antenna support rope into a tree by Babcock Grove during Friday's Field prep, under the watchful eyes of Bill W3WH and Tony KB3BYA.

Photo courtesy of and © Copyright 2019 Eric Udren K3SGT



Every month we're going to feature a **WASH** club member, something about them, something they're involved in or a club-related activity that we're involved in, in the **WASH Spotlight**. Submissions for the Spotlight should be sent to Ron W3WN at newsletter@n3sh.org

Monthly WASH Breakfast



Please join us for the next **WASH** Breakfast! We usually get together on the LAST Saturday of every month for a chance to informally sit down, shoot the breeze, compare notes, drink lots of coffee, and just have a good time!

Join us this month at **Eat'n Park**, 3380 Washington Road (US 19), McMurray. Start time is about 8 AM until ????. Monitor 146.955 & 443.659 for talk-in or any last minute changes.

All are welcome, **WASH** members or not, amateurs or not!

Wireless Association of South Hills Membership

AA3GM
AB3NM
K3CMU
K3GW
K3HCR
K6DWR
KA3VXM
KB3BYA
KB3CMT
KB3DCO
KB3GMN
KB3GMU
KB3IAC
KB3IVX

KB3JHR
KB3ORO
KB3YCX
KC3ELA
KC3GMM
KC3MLC
KC4WTT
KE7FD
N3DFK
N3FB
N3KFD
N3MJP
N3RDG

N3RDV
N3SBF
N3TDV
N3ZK
NU3Q
W3LE
W3WH
W3WN
WA3PYU
WA3VSS
WA3WXR
WB4GCS
WO3Z

WASH FL
KA3UPY/M
W4ZE
WASH NE
N0PEU
WASH OR
KB3NVL
KB3NVM
WASH OH
N8DPW

WASH TN
K3OL
KE3XB
N3YPB
WASH TX
NB3C
K3LGM
KB3IJX
Jane Wagner
WASH VI
NP2JF

Silent Keys

AB3KA
K3EED
K3LIE
KA3NMG
KB3ENX
KB3FNM
KB3FQT
KB3JHQ
N3CZZ
N3FZ
N3HKQ
N3KEH
N3OBD
N3RNX
N3SKR
N3SRC
N3ZEL
N3XFE
W3ZLK
WA3JPP

If your call should be listed here & isn't, please contact Mark N3RDV

FD Setup Photo courtesy of and (c) Copyright 2019 Eric Udren K3SGT

Through July 3rd, 2019
List compiled by
Mark Stabryla N3RDV, Vice President/Treasurer

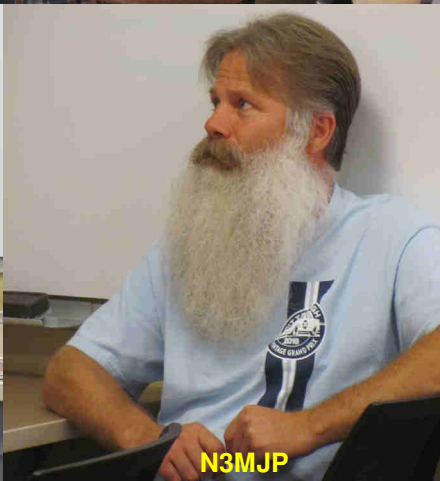
2019 WASH Upcoming Events Calendar

Club Meetings & Other Significant Events — Subject to Change

July 11 th	WASH Meeting	Eat'n'Park, 301 South Hills Village, Bethel Park PA 15241
July 18 th	WASH VE Exams	WPXI Community Room, 4145 Evergreen Road, Pittsburgh PA
July 20 th — 21 st	PVGP Schenley Park	https://www.pvgp.org
July 21 st	Somerset County ARC Hamfest	Somerset County Technology Center, 156 Sequoia Drive, Friedens PA 15541
August 1 st	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
August 25 th	Skyview Radio Society Swap N Shop	K3MJW Clubhouse, 2335 Turkey Ridge Road, New Kensington PA 15068
August 31 st	Uniontown ARC Gabfest	W3PIE Clubhouse, 433 Old Pittsburgh Road, Uniontown PA 15541
September 5 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
September 8 th	Butler Co ARA Swapfest	Unionville Fire Hall, 102 Mahood Road, Butler PA 16001
October 3 rd	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
October 12 th –13 th	63 rd Pennsylvania QSO Party	https://www.paqso.org
October 17 th	WASH VE Exams	WPXI Community Room, 4145 Evergreen Road, Pittsburgh PA
October 26 th –27 th	CQ Worldwide DX Contest SSB	https://www.cqww.com
November 2 nd –4 th	ARRL Sweepstakes CW	http://www.arrl.org
November 3 rd	WACOM Hamfest	Washington County Fairgrounds, 2151 North Main Street, Washington PA
November 7 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102
November 16 th –18 th	ARRL Sweepstakes Phone	http://www.arrl.org
November 23 rd –24 th	CQ Worldwide DX Contest CW	https://www.cqww.com
December 5 th	WASH Meeting	St. Clair Hospital Outpatient Center, 2000 Oxford Drive, Bethel Park 15102

"Seen" at the June Meeting

Photos Courtesy of and © Copyright 2019 Ron Notarius W3WN



W3C—WASH Field Day 2019

Story & Photos Bill Hill W3WH

Chartiers Township, PA, June 24th, 2019 – Well it was quite a ride! FD 2019 is in the record books now and we can look back and say we all had a good time, got some operating time, learned a few things and were blessed with PERFECT weather. It is hard to find fault with anything that did or didn't happen at Babcock Grove in South Park.

Preparations for this year's event began tight after last year's FD when the Grove was reserved by Larry Comden K3VX. Since then, it's been in the back of our minds and even talked about occasionally. Last year we enjoyed local interference free operating provided by the addition of Diplexers and good band pass filters. This year, in order to accommodate a GOTA station we purchased a triplexer and more band pass filters to be used with a three band fan dipole. We installed the fan dipole in the best location available to us which was only about 200 feet from one set of our 80/40 dipoles. We were hopeful that we would enjoy the same operating peace as 2018 but in the beginning it was not to be. The GOTA station was destroying the CW station on 40 meters about five minutes into the event. Ouch! K3VX saved the day though by having common mode chokes in his car. We installed them at the patch panel, and voila! operating peace reigned again. What a relief that was.

However I've gotten ahead of myself. Over the last few weeks, Larry, myself and several others have had lots of tele-conversations, emails and eyeball QSO's discussing every aspect of our FD from Rigs to food to the budget and on and on. As the weekend neared, we talked more and made final plans.

We began on Friday with a pleasant breakfast at Eat'n Park followed by six hours of setting up two sets of antennas at Babcock Grove. The fan dipole proved to be a major challenge while the 80/40 CW antennas went up easily. We're already chatting about how to change things for the better next year which may involve using a different antenna or man made masts instead of trees which we can't move to a location most advantageous to us.

On Saturday we began again after breakfast. We set up the tower trailer and the shelter with five rigs and logging computers etc and we were ready to go shortly after noon. Wow we have never in my memory been ready that early. We were able to enjoy a nice lunch provided by Carol, Richie and Tony. We even had professionally made signs procured by our VP Dan Campbell K3CMU. Thanks Dan!

When the clock reached 1400 local we jumped into the fray and operated continuously for the next 24 hours. Mr Murphy also attended and provided us (and everyone else) with poor operating conditions. In my experience I don't recall having as much trouble copying exchanges as I did this year. Lots of noise and fading. Yuck! About 4:00PM we had loads of visitors consisting of Geocachers and Boy Scouts that kept Glen KE7FD busy on the GOTA station. The local QRM made operating tough while they were there but it was worth it to expose so many to ham radio. Thanks to Curtis KB3CMT, for his work on the visitors.

About 6:00 PM we enjoyed KFC chicken dinner. Thanks again to the folks who fed us.

We also saw other visitors. Bud Plants N3TIR and his grandson James stopped by representing the ARRL and W2RMA stopped in looking for Jim Sanford. I'm certain there were others that I missed. We soldiered on through the night with at least one station on at all times. Even the bugs went to bed after it got too cool for them. That was certainly welcome.

On Sunday morning we had high hopes that 20 meters would grant us with boatloads of cw and phone Q's but alas and alack it was not to be. Very disappointing. One thing that was not disappointing was Sunday breakfast cooked by our Pres Tony Romano KB3BYA Ham barbecue provided by Rick Bell KB3IAC Delicious! As the morning wore on we started to dismantle non essential bits here and there and around 1:00PM while Chuck and his partner (can't recall here name) banged out q's on 40 meters the rest of the gang dismantled everything but the fan dipole. I'm so thankful that we had lots of help doing that job because everyone was tired by that time and it made a big task easier.

So now the tower trailer and all our antennas and coax etc have gone back into storage awaiting the next outing. We will analyze and dissect the good things and the few bumps in the road we had in the hope of making next year's WASH FD even better. We ended up with about 500 QSO's less this year than last, but of course the numbers aren't the entire story. The important thing is that we had a good time, were good hosts to those new to ham radio and that we properly represented the spirit of Amateur radio to those who visited us and worked us.

One final note. This was the last time Larry K3VX and I will lead the Club Field Day effort. We've been involved a long time and newer (spell that younger) folks need to get their feet wet so WASH FD'd will continue for many years. Hopefully we'll still be able to contribute advice, help and most importantly CW.



First Field Day Attendee & Participant

Tim Kelly N8NEU

Pleasant Hills, PA, June 24th 2019 – During a career relocation to Dayton Ohio in 1987, I met two individuals who were into amateur radio. Through these two Ham friends, I studied for first my Novice License, then my Technical License. Code was my weakness and still is today. However, persistence paid off. I passed both tests in late 1989 and I was off to a great start. I joined the Dayton Amateur Radio Association. During the next two years I participated in 2 meter communications, fox hunts, amateur television (built my own ATV station equipment), high altitude balloon projects and of course I volunteered for the mecca of all hamfests “Hamvention” at the HARA Arena.

In 1992, sadly it was time for me to relocate once more. I was relocated to St. Augustine, Florida. I soon found out that this small sleepy city had no radio club and only two semi-active Hams. The closest club was an hours drive away in either direction. I set up a packet relay station between Jacksonville and Daytona Beach. After awhile I lost interest in the hobby and packed my equipment away.

After retiring in 2007, I moved back to Pittsburgh with my wife. Although being raised in Castle Shannon, we ended up settling in Pleasant Hills.

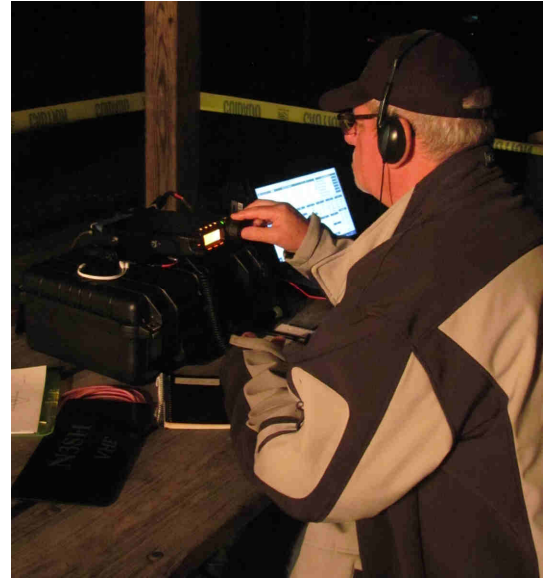
I joined the Amateur Astronomy Association of Pittsburgh. There I met a fellow astronomy hobbyist and later I found out he was a Ham. I told my friend, Mike – AB1A that I was Tech and it had been a many years since I did anything related to ham radio. Mike convinced me to take a class sponsored by WACOM. I took the General class instructed by Bill Steffy – NY9H. On November 4th I took the FCC test at the WACOM Hamfest and received my upgrade to General License.

I brought out my old equipment. My 1970 era Yaesu FT-101ZD was now a boat anchor. It needed some TLC to get it working again. It was time to get serious again.

During the weekend of June 22nd and 23rd, I attended and participated in my first ever Field Day event. All I can say is, “What was I thinking all those past 28 years?” I had an absolute great time during all three days, which included hanging antennas on Friday, working the GOTA station and some FT8 contacts on Tony's (KB3BYA) digital radio on Saturday and tear down on Sunday.

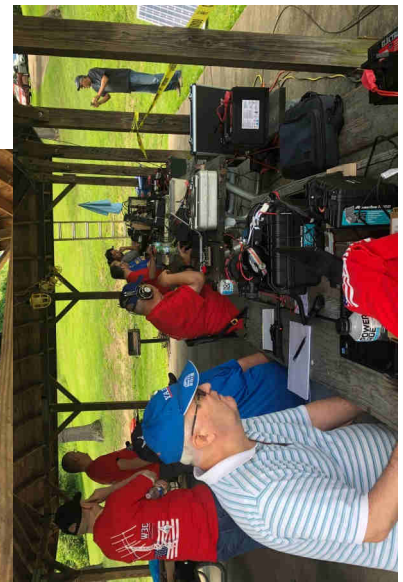
I want to thank Glen (KE7FD) for being my coach on the GOTA and being patient while I figured out what the heck I was doing. I want to also thank all those other Hams who mentored me during the weekend. I met a lot of very nice and helpful club individuals (Hams and non-Hams).

I can't wait to do it again next year!



“Seen” At W3C Field Day 2019

Photos courtesy of and © Copyright 2019 Curtis Turner KB3CMT



WB4GCS Notes on NVIS Antennas

James A. Sanford WB4GCS, PE

Eighty Four, PA, June 19th, 2019 – Author's Note: This article was documenting research on NVIS antennas for the purpose of PA QSO Party operations. While the close-in communications are less necessary at Field Day than PA QSO (not trying to get all counties), NVIS concepts may have some value at Field Day when it "appears" that we have worked everyone on the band(s).

Caveat: These notes are a compilation of impressions from the research noted in the bibliography – they are not a detailed summary of all that I read/learned (I don't have the energy).

Bottom Line up Front: An NVIS antenna is worth doing for PA QSO Party. However, this will compromise some of our principles for sharing bands, which will have to be taken into account in location and in determination of operation schedules.

Notes:

- Typically we erect antennas to achieve the largest distance coverage possible, employing the lowest angle of radiation achievable.. The optimum height for a dipole is $\frac{1}{2}$ – wavelength above ground or $\frac{5}{8}$ – wavelength above ground. This maximizes the range and outer edge of the skip zone, not aiding communications within the skip zone (range between the outer edge of ground wave coverage [10 – 20 miles] and where the closest refraction returns to earth).
- An NVIS antenna is carefully constructed and sited to maximize radiation toward the zenith, to fill in some of the skip zone, allowing close-in communications. (Typically 100 – 200 or 300 miles.)
- Performance and optimum height of any given NVIS antenna for a particular desired communications range is highly dependent upon local soil conditions.
- Truly vertical radiation will be absorbed by the D-layer during the day and radiated into space at night without any refraction.
- There is a minimum critical angle away from the zenith before refraction occurs. (That is, elevation < 90 degrees.) This determines minimum range of contacts. This critical angle is highly variable and dependent upon local soil conditions, other propagation phenomena, and antenna design/siting. It cannot be managed, but must be dealt with.
- Items 4 and 5 above result in the fact that daytime NVIS communications on 80 meters is possible but problematic. Daytime NVIS communications on 40 meters is much more likely. Night time NVIS communications on either band is likely. **OPINION:** This should factor in our plan for when to use which antennas on which bands.
- All soil maps that I could find show the entire state of PA to have *average* soil conductivity. (I expected *poor*.)
- NVIS Communication is possible with an NVIS antenna at only one end of the path. The literature contains an example of two stations on Colorado that wanted to communicate over a 100-mile path with an intervening mountain range. When one of the stations installed an NVIS antenna, signal strengths went from S-5 to S-7 to S-9 + 15 db.
- In the horizontal plane, an NVIS antenna has a *nearly* omni-directional pattern. It still favors the broad-beam axis, but the deep nulls off the end are not there. In a permanent, fixed location with defined communication objectives, this can be optimized with no small amount of effort.
- Based on extensive modeling, Cebik -- reference (1), determined that all NVIS antennas can and should be optimized in wire length at the site. Obviously, more practical in a fixed, permanent installation than a temporary portable setup.
- Cebik's models are aimed at obtaining highest gain toward the zenith, based on soil conditions, conductor size, antenna height, and conductor length. Optimum height ranges from .125 - wavelength to 0.225 - wavelength. (Recall, optimum height for a dipole for low angle radiation is $\frac{1}{2}$ or $\frac{5}{8}$ – wavelength. Again, optimum height depends on the other factors. This works out to 35 – 45 feet at 80 meters, which appears a bit counter-intuitive.
- Cebik also modeled reflectors, which can help optimize NVIS radiation and gain. Again, height and type of reflector is highly dependent on the antenna height and site conditions. A simple planar reflector (6 – to 8- wide chicken wire, for example) on the ground under each conductor, extending twice the conductor length, can be useful.
- The impact of any reflector will be negligible over good soil, of some value over moderate soil, and most effective over poor soil.
- Cebik's modeling, seeking *optimum*, clearly prefers dipoles at optimum height. He acknowledges and models inverted-V configurations. These work fine, but are not optimum.
- A counter-veiling school of thought (references (2) - (5)) is that an NVIS antenna should be 10 to 15 feet above ground. This is based on less extensive modeling than Cebik, and some amount of cited experience. A stated advantage is that this really suppresses the lower angles, whence most noise comes. So, while the signal may be less than optimum, the greater noise level *suppression* results in a superior signal-noise (S/N) ratio.
- DXEngineering proposes a third configuration (reference (2)), citing its successful use in portable operations for events like Ohio State Parks on the Air. Their configuration is based on a military antenna and consists of perpendicular inverted-v antennas for 40 and 80 meters supported by a common 15-foot center support. The total length of each radiator and support rope (which serves as guys for the center support) is 40 feet, giving each radiator a common angle below horizontal. Unlike the site specific length optimizations that Cebik recommends, DXEngineering recommends the military approach – use the fixed lengths and use a tuner to achieve resonance.
- Beyond what Cebik would call sub-optimizations of this antenna (he actually models something similar, cites deficiencies, but acknowledges advantages for portable operations), this has an additional drawback – the vertical feedline is an omni-directional radiator, susceptible to distant noise.

Recommendations

- Since this is a first-time trial for portable operations, I recommend the following:
- We should definitely try an NVIS antenna.
- Recommend we try the DXEngineering configuration. Intended for portable and looks like reasonable effort for an experiment. They will sell us a full kit or parts to build our own. I recommend we build our own, but this is the classic trade-off between effort and dollars.
- Recommend that we put a balun at the feed, *and* a choke to suppress any radiation to/from the vertical feedline.
- We consider plane reflectors on the ground as described above to overcome any ground "deficiencies." I'd use 8 or 12- foot wide chicken wire, unless hardware cloth or something else is cheaper.
- We put this thing as far away as possible from all other antennas (coax loss permitting.)

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"Seen" At W3C Field Day 2019

Photos courtesy of and © Copyright 2019 Harold Rosenberger K3HCR



Preliminary Results: CW 539, Phone 318, Digital 140, total 997 QSOs. Good considering lousy band conditions! Thanks to all who setup, operated, and tore down - Larry K3VX & Bill W3WH



"Seen" At W3C Field Day 2019

Photos courtesy of and © Copyright 2019 Ron Notarius W3WN



"Seen" At W3C Field Day 2019

Photos courtesy of and © Copyright 2019 Ron Notarius W3WN



Amateur Radio Operators Needed for the 2019 Pittsburgh Vintage Grand Prix



The Pittsburgh Vintage Grand Prix is seeking Amateur Radio operators to work the Flag & Safety corners, and provide race communications for the 2019 PVGP events.

This year, Amateur Radio Operators are needed for these race weekends:

The Historic Race Weekend on July 11th - 14th, at Pitt Race (formerly BeaverRun Motorsports Complex) in Beaver Falls, featuring Muscle Cars & European Racers from the 60's & 70's,

The Vintage Race Weekend on July 20th & 21st, in Schenley Park in the Oakland section of Pittsburgh, featuring sports cars from the early days of automobiles through the 1950's.

For More Information or to Volunteer, please call Corky Bennet N3MJP at (724) 217-5458



Antenna Physics: An Introduction

A Review by James A. Sanford WB4GCS, PE

Over the last several weeks, I have had an excellent opportunity to catch up on long-overdue reading. The above title caught my attention when it was announced in *QST* a couple of months back, and I ordered it – glad I did!

The seminal engineering text on antennas is John D. Kraus' *Antennas*. Yes, *that* Kraus, W8JK (SK). I have both the first and second editions and have read both cover to cover. I got a lot out of that exercise, but don't ask me to regurgitate the heavy calculus. I would describe *Antenna Physics* as Kraus without the ugly calculus. Yes equations are used for notation and conciseness, but they are not derived or proven. Instead, they are used to communicate key concepts, and carefully explained *intuitively*. We all think we know a lot about how various antennas work; this book will help understand *why* those things are true, as well as dispel some widely-held myths.

Highlights include an intuitive discussion of Maxwell's equations, which are fundamental to understanding electromagnetic radiation, and explain why electro-magnetic waves exist, and how they are and are not created. (An *accelerated* charge, like a dipole excited by sine-wave RF, is required, a steady current (like feeding a resistance heater) will create a static magnetic field, but not a radiating wave.) Further, the author uses Maxwell's equations to explain why there must always be both a radiating magnetic field and electric field, leading to the most common propagation mode (in free space), the transverse electro-magnetic field (commonly abbreviated, TEM). (See also, *QST* for December 2017, page 59, H. Ward Silver's article, *Maxwell's Equations – the Wave Emerges*.)

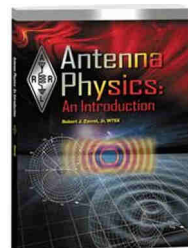
Recall that in the heyday of 2-meter FM when repeaters were few and far between, the 5/8-wavelength antenna was the rage for mobiles – this book will show you why.

Other significant topics, all explained *intuitively*:

- The concept of antenna aperture, how it is calculated and why it matters
- Physical versus effective aperture
- The difference between *isotropic* (ideal, omni-directional in 3 dimensions) and real antennas
- Radiation resistance, its significance (think very inefficient mobile HF antennas) and how it is measured/calculated; also the relationship between radiation resistance and feedpoint impedance
- An assessment of short vertical antennas (mobile HF)
- The significance of antenna *current* to radiation and radiation patterns, using EZNEC models and plots
- An intuitive discussion of standing waves and SWR
- Multiple element antennas, both actively fed (phased arrays like the 4-square) and parasitic arrays (Yagi-Uda beams) – how they work is *very* different
- Assessment of several popular real antennas, like a 1/4-wavelength vertical versus a top-loaded version of the same antenna
- Intuitive discussion of ground loss, why it matters, and its impact
- Why loops behave the way they do (nicely complementing ARRL's book on receiving antennas)
- An intuitive discussion of noise, antenna and system temperature, and impact on signal-to-noise ratio – typically discussed in context of microwave systems, but worth understanding at HF as well
- Atmospheric noise generation and values versus frequency – explains why your HF receiver needs strong-signal handling capability more than the low noise figure cherished by microwave operators

You may consider this book a challenge, but I believe it to be well within the capability of any licensed ham to understand. If you want a better understanding of *how* and *why* antennas work the way they do, I highly encourage you to read this book.

Mine is heavily tabbed, and is accorded a place on my special shelves for "classic" engineering texts, along with Kraus. My copy is available for loan, but *I will want it back!*



Restraint Urged In Response to 2 Meter Re-Allocation Proposal

American Radio Relay League

Newington, CT, July 6th, 2019 – Representatives of International Amateur Radio Union (IARU) member-societies in Europe are advising restraint in the wake of a proposal to consider the allocation of 146 – 148 MHz to the Aeronautical Mobile Service (AMS) at World Radiocommunication Conference 2023 (WRC-23). France recently raised the prospect during a European Conference of Postal and Telecommunications Administrations (CEPT) meeting in Prague, held in advance of WRC-19. A WRC-19 agenda item would call for studying a range of frequencies for AMS applications, including 144 – 146 MHz, and a decision could be made at WRC-23.

The French draft resolution seeks studies of possible new AMS primary allocations in several bands in the range from 144 MHz to 22.2 GHz on a primary basis, "while ensuring the protection of existing services in those bands and, as appropriate, adjacent bands, and not constraining future development of these services."

The Radio Society of Great Britain (RSGB) released a [statement](#) last week, in part pointing that as proposed, the French resolution "is not an eviction or re-allocation of amateurs, but nonetheless is unwelcome and presents significant challenges. Unlike some other bands where amateurs do share, aeronautical applications are amongst the most difficult due to the altitudes and long free-space distances involved."

Any consideration to allocate additional services in a band that's already allocated on a primary basis to an incumbent service — Amateur Radio, in this case — must begin with a sharing/compatibility study. The IARU has expressed "grave concern" to any proposal that would include 144 – 146 MHz in a WRC agenda item and has pledged to make every effort to fully protect Amateur Radio interests and seek the support of regulators.

At the Prague meeting, only Germany opposed the proposal, which has been carried forward to the higher-level CEPT Conference Preparatory Group (CPG) meeting in August. Support from at least 10 CEPT administrations and fewer than six in opposition would move the issue forward as a CEPT resolution, making it highly likely that it would appear on the agendas of WRC-19 and WRC-23.

In a post to the Moon-Net news group, Deutscher (German) Amateur Radio Club (DARC) Frequency Manager Bernd Mischlewski DF2ZC stressed the importance that Amateur Radio speak with a single voice and asked the Amateur Radio community to refrain from contacting individual administrations or the EU.

"This would weaken our position and take away power and vigor from the systematic approach by IARU and country Amateur Radio societies," Mischlewski said. "This particularly applies [to] online petitions." One frantic petition that's collecting both signatures and donations calls on hams to "Stop the 2 Meter Band (144 – 146 MHz) being taken away from Radio Amateurs," which is not what the draft French resolution would do. Mischlewski speculated that the primary reason for the scant opposition at Prague was the revised French proposal's last-minute arrival. "Consequently, most other European countries had no time for internal discussions, let alone formulating their position," Mischlewski said.

With the support of regulatory experts among its member-societies, IARU "is intensively working on executing their influence within the current process and trying to keep the 2-meter band as it is now," Mischlewski said. He pointed out that funding for these activities comes from IARU member-societies. "So, those who left their country's Amateur Radio society should perhaps reconsider their decision," he added. "Without the commitment and the funds, the Amateur Radio community would have little influence in that process, let alone could be present at the relevant meetings."

RSGB VHF Manager John Regnault G4SWX in a related Moon-Net post, said the flood of "fake news" on the issue propagated via social media and online petitions does not help Amateur Radio's position.

"All IARU member societies have been briefed on a common position and messages for Amateur Radio," Regnault said. "This message is not helped by the many wrong messages abounding on social media. IARU represents Amateur Radio in the various CEPT forums and ITU, and [it] will fight to maintain the best position it can for Amateur Radio. Progress will be slow, but I am hopeful that, in the end we will get a good result."



Happy 150th Birthday, HPM!

American Radio Relay League

This year marks the 150th anniversary of the birth of ARRL's first president and cofounder Hiram Percy Maxim (HPM) W1AW, born on September 2nd, 1869. ARRL will hold an operating event this summer to celebrate HPM's legacy from 0000 UTC on August 31st and continue until 2359 UTC on September 8th. It is open to all radio amateurs.

The event goal is straightforward: Contact as many participating stations as possible. W1AW and all ARRL members will append "/150" to their call signs during this event (DX operators who are ARRL members may operate as <call sign>/150, if permitted by their country of license.) Participating stations will exchange a signal report and their [ARRL/RAC Section](#). DX stations will send a signal report and "DX." Those taking part may use all Amateur Radio bands, excluding 60, 30, 17, and 12 meters.

The event will recognize three mode groups: CW, phone (any voice modes), and digital. Submit Cabrillo log files. ARRL will calculate all final scores based on participant uploads to the ARRL event web app (link not yet active).

There are 84 multipliers, which only count once. These include the 83 ARRL/RAC Sections (RAC sections include the Canadian Northern Territories, encompassing VE8, VY1, and VY0), and DX. The W1AW operating schedule during this period may be adjusted as necessary to accommodate on-air celebration operating activities. Contacts with W1AW/150 will earn 3 points apiece. Contacts with any ARRL member will earn 2 points each. These stations will also identify as <call sign>/150. Contacts with nonmembers will earn 1 point each.

Participants can earn 150 bonus points by:

- Contacting W1AW/150 on each band and mode.
- Uploading entries (ARRL members only).
- Using social media to publicize this event and/or participation before, during, and/or after the event.
- Operating with 5 W PEP output or less throughout the event.
- Making at least 20 contacts while operating portable.
- Completing at least 150 contacts.

Online certificates will be awarded, and available [via download](#) only. Updates and results will be [publicized](#).

This event has no power or operator categories. Participating ARRL members who use Logbook of The World (LoTW) are encouraged to [create a separate LoTW certificate](#) for uploading <call sign>/150 contacts. Members should upload their logs for this event using their /150 certificate. This event requires online web app submissions. No email or paper submissions will be accepted.



Radio Amateur to Lose License as Part of Enforcement Case Settlement

American Radio Relay League

Newington, CT, June 18th, 2019 – A New Jersey radio amateur, David S. Larsen Sr. WS2L, of Highland Park, will surrender his Amateur Extra-class license and pay a \$7,500 civil penalty as part of a *Consent Decree* with the FCC to settle an enforcement action. An FCC Enforcement Bureau [Order](#) released June 18th said Larsen violated the Communications Act of 1934 and Part 90 rules by operating on frequencies licensed to the Borough of Highland Park for public safety communication.

As part of the settlement, Larsen agrees that he will admit making the unauthorized transmissions, not engage in unauthorized use of a radio station, and surrender radios in his possession capable of transmitting on the town's public safety frequencies. If the Commission finds that Larsen has made unauthorized radio transmissions or otherwise violates the terms of the *Consent Decree*, he'll be subject to an additional \$32,500 civil penalty. The agreement stipulates that Larsen may not apply for a new Amateur Radio license for 3 years.

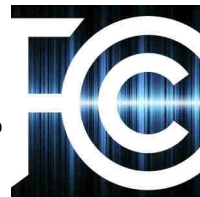
The case stems from a May 2018 complaint of unauthorized transmissions on the Highland Park municipal radio system. FCC agents followed up with several visits to the town.

"Based on information provided by the complainant and direct observations by the Bureau's agents, the unauthorized transmissions consisted of brief, pre-recorded sounds (such as the sad trombone sound)," the FCC said in the *Consent Decree*. The FCC said individuals the agents interviewed identified Larsen — a former rescue squad volunteer — as the person who was likely responsible.

Responding to an FCC *Letter of Inquiry*, Larsen subsequently contacted the Enforcement Bureau and related that the unauthorized transmissions had ceased. Last fall, Larsen, responded to the inquiry through counsel to deny making the unauthorized transmissions. A short time after that, the unauthorized transmissions resumed, and the FCC resumed its investigation, attempting to trace the source of the transmissions. Last March, agents used direction-finding equipment at a fixed location near the complainant's residence, while other agents conducted mobile direction finding of Larsen's vehicle in transit.

"The four agents observed Mr. Larsen pull over to the side of the road on the way to his home," the *Consent Decree* recounts. "The four Bureau agents observed (a) that during the brief stop, Mr. Larsen remained in his vehicle, (b) while stopped, a brief transmission consisting of the sad trombone sound emanated from the direction of Mr. Larsen's vehicle on a frequency licensed for use by the Highland Park Radio System, and (c) following the transmission of the sad trombone sound, Mr. Larsen resumed his drive to his residence."

The FCC said agents returned in April to observe Larsen repeat the earlier behavior, including a similar transmission emanating from Mr. Larsen's vehicle, according to the *Decree*.



Pennsylvania Radio Amateur Dies in Tower Installation Mishap

American Radio Relay League

Newington, CT, June 19th, 2019 – A 62-year-old Union Dale, Pennsylvania, radio amateur — Leland L. "Lee" Parsons III N3LPJ — was killed on June 14 during a tower installation project when a tower section he was working on collapsed off State Route 2069 in Gibson Township. Authorities said Parsons was apparently attempting to attach a guy wire to the bottom tower section when it went over. Parsons was an ARRL member and the president of the Susquehanna County Amateur Radio Club.

The online *Wireless Estimator* [called the incident](#) "a stark reminder of the dangers present this weekend during Field Day." The article cited a 2009 Field Day tower collapse that claimed the life of 57-year-old Larry Prelog KE4PM — an experienced climber — while he was installing an antenna. In that incident, two legs at the base of the tower buckled.

The *Wireless Estimator* article also recalled the death of the Reverend Paul Bittner W0AIH, 84, a well-known radio amateur, contester, and Field Day participant, who lost his life last October when he fell from one of the towers at his extensive antenna farm in Wisconsin.

Parsons was among the founding members of the Susquehanna County Amateur Radio Club. He also belonged to the Wayne County Amateur Radio Club.



ARRL Files Interim Report in "Symbol Rate" Proceeding

American Radio Relay League

Newington, CT, June 14th, 2019 – ARRL has filed an [interim report](#) with the FCC in order to report on its efforts to find common ground regarding issues surrounding the "symbol" or "baud" rate proceeding, FCC Docket WT 16-239 (the FCC has issued a [Notice of Proposed Rulemaking](#) in WT 16-239, which stemmed from ARRL's rulemaking petition RM-11708). ARRL highlighted that the public benefits from the FCC's "fairly flexible" regulation of Amateur Radio. In particular, innovative developments in digital technology, including *WSJT-X*, were cited.

Noting that more than 1,400 comments in total have been filed in this and on a related rulemaking petition ([RM-11831](#)), ARRL pointed out that, as in other Commission-regulated areas, adapting current regulations to rapidly evolving technology presents challenges that may require adjustments to, or clarifications of, the governing regulations. Making such adjustments can be a challenge to ensure that valid regulatory purposes continue to be served without stymieing technological change and innovation in the process.

While a June 11th meeting organized by ARRL had to be reset to accommodate the invited parties, ARRL has re-affirmed its commitment to protecting the interests of all amateurs. ARRL said it will continue to pursue its efforts to address and reconcile differing opinions expressed in the two matters now pending before the FCC.



Another look at W3C Field Day 2019 Setup at Babcock Grove, South Park, on Friday. Photo courtesy of and © Copyright 2019 Eric Udren K3SGT

YASME Foundation Supporting Grant to ARDEN

Ward Silver NØAX, President, The Yasmie Foundation

St. Charles, MO, June 20th, 2019 – The Board of Directors of The Yasmie Foundation has made a supporting grant to Amateur Radio Emergency Data Network (AREDN) a non-profit 501(c)(3). AREDN extended the early work of the Broadband Ham Net mesh developers by developing firmware (and related user software) for more modern and efficient consumer routers.

Based in San Diego, California, the AREDN development team has produced code for the Ubiquiti 2, 3 and 5 GHz routers and has recently added firmware to convert lower-priced consumer equipment from other manufacturers for amateur mesh network use. Yasmie's grant will be used to purchase test equipment to aid AREDN development efforts.

The Yasmie Foundation is a not-for-profit corporation organized to support scientific and educational projects related to Amateur Radio, including DXing and the introduction and promotion of Amateur Radio in developing countries.

DXpeditions in Iran

Ali Solhjoo EP3CQ / 6O1OO via OPDX

Berlin, Germany, July 1st, 2019 – The Communications Regulatory Authority and Parsian Amateur Radio Club are opening DXpedition opportunities in historical sites on Iran.

The first location that is being announced and available now is Shapour Citadel, in Chaharmahal and Bakhtiari Province. They are looking for a good start and then spread the same to other very famous sites in the country i.e. Persepolis of Shiraz, Yazd, etc.

I suppose this is a very rare and great opportunity to have a DXpedition in Iran. Weather condition is very good now, visa upon arrival for three month and super cheap in terms of expenses i.e. flights around 20-50\$ etc. Indeed it is a unique experience and opportunity.

All interested DXpedition teams can send their request(s) for 3 to 30Mhz (standard HF bands). No limitation on mode of operation. Requests should be submitted 3-4 month to (ep3ag@yahoo.com) prior to the actual operation, for coordination and obtaining the relevant license(s).

Apollo 11 Anniversary SES

Jeff Abreu K3ERA

Belmont, CA, July 8th 2019 – HARC, The USS Hornet Amateur Radio Club **NB6GC** will be on the air this month celebrating the 50th anniversary of the recovery of the Apollo 11 Astronauts by the USS Hornet on July 24th, 1969.

We will be providing a special QSL card to all stations that work us during the month of July. We will be specifically on the air during July 20th and 21st when the USS Hornet museum is celebrating, and we will also be on the air on July 24th, the actual date of the recovery as well.

We will probably be on the air other dates during the month, but these dates are not yet known, as we will open up for visitors who request a tour of the radio room and wish to operate. So listen for us and work us and help us commemorate this historic event! You can get more information about our club and its events either on facebook: <https://www.facebook.com/NB6GC>, or on our website: <http://www.hornet-arc.us/>



DX News Briefs



ASORAPA members will be QRV as **AO5ØMOON** during July to celebrate the 50th anniversary of the Apollo XI landing. QSL via EA1RCI

World traveler KHØ/KCØW will be QRV as **KØW** from Saipan (OC-086) through 14 July. More information at <https://www.qrz.com/db/k0w>. QSL via KCØW

KU9C/VP9 and **KL7SB/VP9** will be QRV from the VP9GE QTH through 15 July. They will be QRV as **VP9HQ** during the IARU HF Championship. QSL KL7SB/VP9 via N4GNN, KU9C/VP9 and VP9HQ via KU9C.

SP9FIH will be QRV as **E44WE** 6 July – 6 August, 80 30 20 & 6 on SSB, with some RTTY and FT8. More information at <http://www.e4.dxpeditons.org> QSL via SP9FIH

DL2GAC will be QRV as **H44MS** 7 July – 20 September, 80 40 20 15 10 & 6, SSB FT8 and possibly some RTTY. QSL via DL2GAC.

PY7RP will be QRV as **PYØF** from Fernando de Noronha (SA-003) 27 – 28 July during the RSGB IOTA contest. More information at <https://py0f.wordpress.com> QSL via PY7RP.

AI5P will be QRV as **FO/AI5P** 22 – 29 July, 40–17, CW & FT8. QSL via AI5P

CY9C will be QRV from St. Paul Island 31 July – 8 August. They are hoping to fill "many" band spots and fills. More information at <https://cy9c.com>. The same group is planning to operate from Sable Island as **CYØC** in October 2020. QSL via WA4DAN or Club Log.

AI5P will be QRV as **VK9APX** from **VK9L** Lord Howe Island (OC-004) 1 – 10 August, 40 – 17, CW & FT8. QSL via AI5P

TO5M will be QRV from **FP** St. Pierre & Miquelon (NA-032) 10 -18 August, 160 – 6, CW SSB FT8 & some SSB. More information at <http://fp2019.net> (This call has been used before from a different DXCC entity)

HA5AO should be QRV as **3DAØAO** 15 September – 1 October, 80 – 10, with CW & FT8 primarily on the higher bands. He will then be QRV as **7P8AO** 1 – 19 October, during his free time, primarily CW & FT8 on the high bands. More information at <https://www.ha5ao.com>

VK9NK will be QRV from Norfolk Island (OC-005) 12 January – 12 April 2020, 160 – 10, SSB RTTY & FT8. QSL via SP9FIH

9J2LA (tentative call) is scheduled to be QRV 5 – 15 March 2020. The team plans to concentrate on CW & FT8 on the low bands, CW SSB & FT8 on the high bands. FT8 will be their primary data mode. More information at <https://9j2la.com> QSL via MØOXO

5B4ALX will be QRV as **T3ØET** from Tarawa (OC-017) 18 March – 2 April 2020, 160 – 6 CW SSB FT8 & RTTY. More information at <http://www.5b4alx.cloud/te03t=tarawa-atoll-2020>. QSL via 5B4ALX

GW4DVB will be QRV as **J88PI** from NA-025, 6 – 14 April 2020, holiday style, 40 – 6 meters CW SSB SSTV & FT8. More information at <http://www.g4dvh.co.uk> QSL via GW4DVB

QSL Routes

6Y3Y via JJ2RCJ	EV19BOX via EV1R	PJ7PL via N2HX
8P2K via KU9C	EV19KAR via EW4W	TC16BURSA via YM3KM
8P6SH via KU9C	GB75DDAY via GØTOC	TK/DL5CW via DL5CW
AN5ØLGBT via EB3GCP	HB9ØCSA via HB9CSA	KL7SB/VP9 via N4GNN
CY9C via WA4DAN	IIØGDF via 9A8AOT	KU9C/VP9 via KU9C
D44TEG via HB9EBT	J88PI via GW4DVB	VK9NK via SP9FIH
DKØDFF via DL7AFS	LA/PA1SVM no QSLs	VP9HQ via KU9C
DL3ØØAH via DG2FEJ	OHØ/EA5DCL via EA5DCL	
DM19BUGA via DG7SCB	OH9A via OH1NOA	
EVØMA via EV1R	OJ9A via OH2BH	
EVØSD via EV1R	OZ/SP1C/P via SP1C	

Thanks to the NJDXA DX News Reflector, the DX-QSL Reflector, 425 DX News, OPDX News, DX Coffee, DX World.Net, ICPO Bulletin, & ARRL DX Bulletin for our **DX News** information. Thanks also to the ARRL DXCC Desk, & Bernie McClenny W3UR / The Daily DX for confirmations & additional information.



FCC ***FCC News***
Courtesy of the American Radio

Courtesy of the American Radio Relay League

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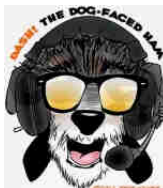
Antenna Zoning or PRB-1 Issues?

Contact: **Michael S. Lazaroff K3AIR, Esquire**
Lazaroff & Suhr, Attorneys at Law
277 West Main Street, Saxonburg, PA 16056
Phone: 724-352-4905

The **WASH**Rag Masthead is courtesy of Jeff Murray K1NSS, creator of DASHToons & Dash the Dog Faced Ham!!

Find the online cartoons and stories of Dash the Dogfaced Ham & more at <https://www.jeffk1nss.com> !

Shop for Dash items at his online store on Café Press,
www.cafepress.com/shopdash

US Amateurs by Class as of June 30th, 2019:

Novice	9,417
Technician	414,059
General	189,375
Advanced	43,089
Extra	154,169
Club	12,723
Total	822,832

All-Time High	02/11/2019	825,088
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Last 90 Days:	New Amateurs	7,648
	Callsign Changes	2,738
	Class Changes	4,171

No Longer Licensed	7,404
All Updates (*)	30,820

(*) Includes renewals, address changes, etc.

Information gathered from FCC Daily Updates, courtesy of [Hamdata.com](https://www.hamdata.com)



Has Roadway found the tower yet?

Newington, CT, June 27th, 2019 – The FCC has put on public notice for comment a *Petition for Rulemaking* ([RM-11843](#)) that seeks the creation of a new 8-meter Amateur Radio allocation on a secondary basis. The Petition suggests the new band could be centered on an industrial-scientific-medical (ISM) segment somewhere between 40.51 and 40.70 MHz. The spectrum between 40 and 41 MHz is currently allocated to the Federal Government and, as such, within the purview of the National Telecommunications and Information Administration ([NTIA](#)). ARRL member Michelle Bradley KU3N, of Maryland, filed the petition in May on behalf of REC Networks, which she founded and described in the *Petition* as “a leading advocate for a citizen’s access to spectrum,” including Amateur Radio spectrum.

“REC feels that the time is right for the Commission to open a *Notice of Inquiry* and eventually a *Notice of Proposed Rulemaking*, and in cooperation with the NTIA, this new band opportunity can be realized to spark the next generation of ‘makers’ in the fields of science, technology, education, and math (STEM), especially women and girls,” Bradley told the FCC in the *Petition*. “The more opportunities we give to make things, the more opportunities we have to build a pool of experts in STEM, right here at home.”

The *Petition* said the objective of a new band would be “an effort to foster experimentation into the propagation characteristics of this band midway between the 10- and 6-meter bands.” An allocation in the 8-meter band is available to radio amateurs in Ireland, where the Irish Radio Transmitters Society has developed a band plan for 40 – 41 MHz.

“REC perceives this spectrum can be used for weak signal experimentation and eventually general amateur use, especially along transatlantic paths using CW, SSB, digital modes such as FT8 and digital voice,” the *Petition* said. “As no radios are mass-produced for this band at this time, this opens up new opportunities for ‘makers’ to construct transmitters, receivers, and antenna systems that can be used in this spectrum.”

REC anticipates “very low” usage of the new band, “with peak usage around sporadic-E episodes, operating events such as ARRL Field Day, and VHF contests, as well as during the peak of sunspot cycles,” Bradley told the Commission. “[W]e feel that the sharing of 40 MHz can be accomplished in a manner that serves the needs of the Amateur Radio Service while meeting the organizational missions of Federal Government agencies that utilize this spectrum.”

Interested parties may file short comments on RM-11843 via the FCC's [Electronic Comment Filing Service \(Express\)](#). Visit the FCC "[How to Comment on FCC Proceedings](#)" page for information on filing extended comments.



**Our Field Day neighbors, the South Park Buffalo.
Photo courtesy of and © Copyright 2019 Eric Udren K3SGT**

If you've downloaded the **WASH**Rag from the N3SH web site, or picked up a copy from a friend... you can sign up to have the PDF copy sent directly to your email. You **do NOT** have to be a member of **WASH**!

Just send an email to wa3sh-subscribe@yahoogroups.com and the automation should take care of the rest!

Somerset County ARC 19th Annual Hamfest

Sunday, July 21st, 2019, 8:00 AM—1:00 PM

Vendor Setup starting at 6:00 AM



Somerset County Technology Center

156 Sequoia Drive, Friedens, PA 15541

Talk-in on 147.195 & 443.250 PL 123 Admission \$5.00

More Information at <http://www.k3smt.org>

Skyview Radio Society "Swap N Shop"

Sunday, August 25th, 2019, 8:00 AM—???

Vendor Setup prior to 8:00 AM



K3MJW Clubhouse

2335 Turkey Ridge Road, New Kensington, PA 15068

Talk-in on 146.64 PL 131.8 Admission \$5

More Information at <http://www.skyviewradio.net>

Uniontown ARC 70th Annual Gabfest

Saturday, August 31st, 2019, 8:00 AM—???

Vendor Setup prior to 8:00 AM



W3PIE Clubhouse

433 Old Pittsburgh Road, Uniontown PA 15401

Talk-in on 147.045 PL 131.8 Free Admission

More Information at <http://www.w3pie.org>

Butler County ARA Swapfest 2019

Sunday, September 8th, 2018, 8:00 AM—3:00 PM

Grounds Open at 6 AM for Vendors & Tailgaters

Unionville Volunteer Fire Department

102 Mahood Road (at Route 8 North), Butler, PA 16001

Talk-in on 147.360 PL 131.8 Admission \$5

More Information at <http://www.w3udx.org>





WIRELESS ASSOCIATION OF SOUTH HILLS, INC.

Membership Application, New or Renewal



I would like to join WASH! I am interested in the following type of membership: ☐ **New Membership** ☐ **Membership Renewal**

(check quarter _____)
(check one)

	<input type="checkbox"/> 1st Qtr Jan-Mar	<input type="checkbox"/> 2nd Qtr Apr-Jun	<input type="checkbox"/> 3rd Qtr Jul-Sept	<input type="checkbox"/> 4th Qtr Oct-Dec
<input type="checkbox"/> (F1) Full Membership:	\$20.00	\$15.00	\$10.00	\$5.00
<input type="checkbox"/> (F2) Full Membership < 18 or > 65 yrs of age:	\$10.00	\$7.50	\$5.00	\$2.50
<input type="checkbox"/> (A1) Associate Membership:	\$10.00	\$7.50	\$5.00	\$2.50

☐ (FM1) Family Membership (\$3.00 x No. of household family members): \$ _____

Name(s): _____

Name: _____

Address: _____

City, State: _____

Home Phone: _____

Email Address: _____

New Members Only:

☐ I do NOT want to be added to the Club E-Mail Reflector

☐ I do NOT want to be added to the Electronic Newsletter Mailing List

[If you have an Email address, you Will be added to both lists UNLESS you choose to Opt-Out]

Signature: _____

Call Sign: _____

License Class: _____

Expires On: _____

Work Phone: _____

Birthday: _____

ARRL Member? ☐ Yes ☐ No Family ARRL Member? ☐ Yes ☐ No

Date: _____

Amount Enclosed: \$ _____

N3RDV has requested that all membership requests and renewals include an application so that his information is up to date

Please make your check or money order payable to the club treasurer, Mark Stabryla.
The Wireless Association of South Hills, Inc. reserves the right to accept or reject new memberships or renewals.
Please return completed membership form along with check/money order to the club treasurer or mail to:

WIRELESS ASSOCIATION OF SOUTH HILLS, INC.
c/o Mark Stabryla N3RDV, VP/Treasurer
1120 McKnight Drive
Bethel Park, PA 15102-2456



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Arghh!
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Directions to the **W3C** Field Day 2019 Site

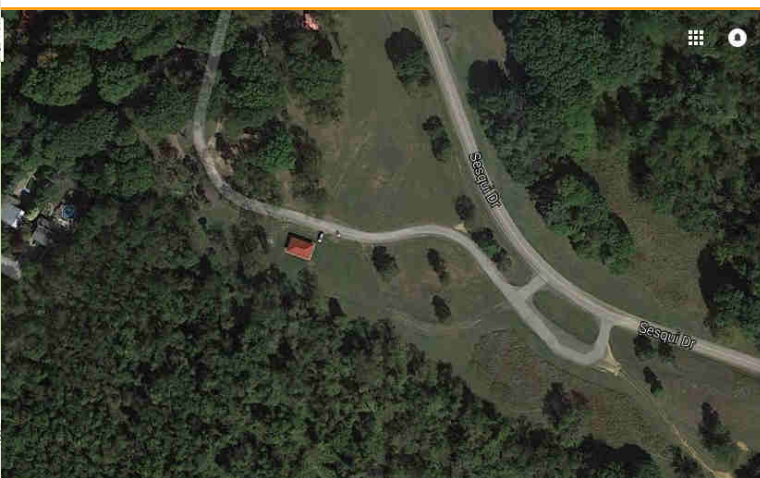
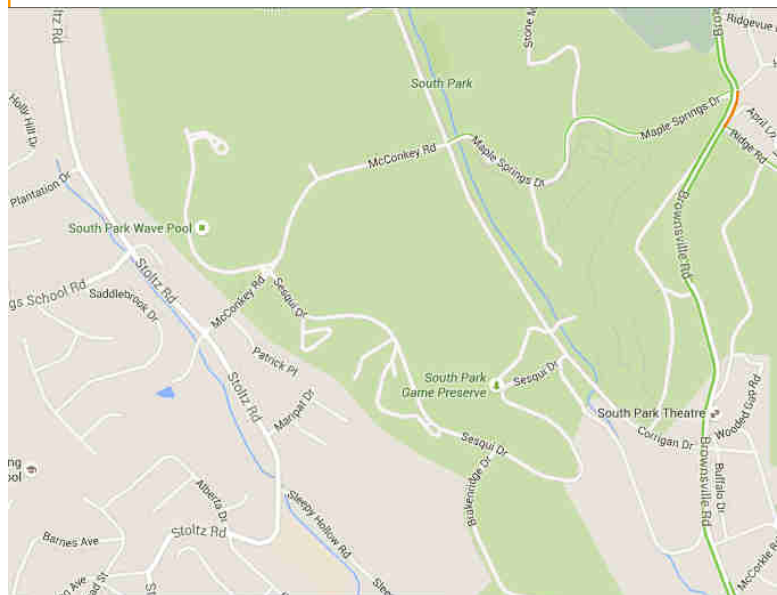
Babcock Grove is located on Sesqui Drive in South Park. (See map below left)

Enter South Park (from either Library Road or Brownsville Road) and proceed to Corrigan Drive.

From Corrigan, turn onto McConkey (opposite side of the light is Maple Springs Drive), head towards the Wave Pool.

At the entrance to the Wave Pool parking area (on the right), turn LEFT onto Sesqui Drive

Follow Sesqui Drive to Babcock Grove (on the right side)



The **WASH**Rag

Wireless Association of South Hills, Inc.

Ron Notarius W3WN, Editor

3395 Rosewood Drive

Castle Shannon, PA 15234-2546



N3SH / WA3SH
NP2SH/B

www.n3sh.org
www.washarc.org

